

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0045] with the following amended paragraph.

[0045] The main active component in the compositions of the present invention, are populations of nanocrystals that have absorption spectra (excitation wavelengths) and emission spectra that fit the requirements of the invention, e.g., have a component of the absorption spectrum that is in the desired range and an emission spectrum that is in the nonvisible range. For example, the nanocrystals can absorb in the UV, visible, IR (near-IR, mid-IR and/or far-IR), and emit in the UV or IR spectrum. A nanocrystal that emits in one range of wavelengths can absorb light in that same range (but at a ~~shorter~~longer wavelength), or optionally, can absorb in a range of higher energy than emissions (e.g., absorb in the visible and emit in the IR). In many embodiments of the invention, near-IR emission is preferred, as is near-IR absorption. Preferred nanocrystal compositions can have an absorption spectrum that is in the UV, visible or near IR range, with an emission spectrum that is within the near IR to IR range. In particularly preferred aspects, nanocrystals that absorb in the UV or near IR range and emit in the near IR range are preferred, with near IR absorbing and emitting nanocrystals being most preferred for many embodiments.